

ABSTRACT OF THE DISCLOSURE

An expression system useful for the detection and isolation of a polypeptide capable of regulating a transduction pathway, the expression system comprises (a) a first expression construct including a first coding region encoding a reporter molecule, the first coding region being under transcriptional control of a cis acting regulatory sequence element, the cis acting regulatory sequence element being regulatable by a trans acting regulator of the transduction pathway; and (b) an expression library including a plurality of second expression constructs, each of the plurality of second expression constructs of the expression library including a second coding region encoding for one of a plurality of polypeptides, the second coding region being under a transcriptional control of a promoter, such that when the first expression construct and a second expression construct of the plurality of second expression constructs of the expression library are introduced into a cell, the cell endogenously expressing the trans acting regulator of the transduction pathway, a level of expression of the reporter molecule in the cell is indicative of regulation of the transduction pathway by a specific polypeptide of the plurality of polypeptides expressed by the cell from the second expression construct.